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(54) SWITCHING POWER SUPPLY

(57) Abstract:

PURPOSE: To protect a switching element against breakdown due to heating by providing a resistor connected in series with the switching element, a capacitor, a switch circuit, and a protective control circuit.

CONSTITUTION: When a current ID flowing through a switching

element 4 exceeds a predetermined level, voltage V3 across a resistor 26 connected in series with the switching element 4 also exceeds a predetermined level and thereby a switch circuit 30 is turned ON to start charging of a capacitor 28. When the current ID flowing through the switching element 4 is sustained above the predetermined level, charging operation of the capacitor 28 is sustained and when the voltage V4 across the capacitor 28 exceeds a predetermined level, switching operation of the switching element 4 is forcibly stopped through a protective control circuit 40. Consequently, the switching element 4 is protected against thermal breakdown at the time of overload.

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